Claim 1 covers a method where antennas are sequentially selected for purposes of transmitting data blocks. For example, as shown in Figure 5, under normal operating conditions (e.g., when no error signal is received), data blocks are alternately transmitted through antennas 1 and 2. This sequential selection is evident from the following recitation in claim 1: transmitting a first data block through a first one of a plurality of sequentially selected antennas and transmitting a second data block through a second one of the plurality of antennas." (In Figure 5, for example, sub-frame 1 corresponds to the first data block and sub-frame 2 corresponds to the second data block).

In addition, claim 1 recites receiving a first signal (e.g., NACK) indicating that an error occurred during transmission or reception of the first data block, the first error signal received after transmission of the second data block, and then interrupting sequential selection of the plurality of antennas to select the second one of the plurality of antennas in response to the first error signal.

The first data block is then retransmitted through the second one of the plurality of antennas, under conditions where "the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas." Sequential selection of the antennas is then resumed after retransmission of the first data block. These features are not taught or suggested by the cited references.

A. The Hiramatsu Patent

The Hiramatsu patent discloses a data transmission system having two antennas. Data is transmitted through the same antenna until an error message is received. (See column 6, lines 42-44). Thus, Hiramatsu does not teach or suggest performing a "sequential selection of a plurality of antennas" for purposes of transmitting data blocks. Rather, Hiramatsu makes clear that changer 113 only changes antennas when an error message is received. Otherwise, Hiramatsu continues to transmit data through the same antenna.

Without a sequential selection of antennas, it is further submitted that Hiramatsu does not teach or suggest "interrupting sequential selection of the plurality of antennas to select the second one of the plurality of antennas in response to the first error signal." As defined in claim 1, the "first error signal" indicates that an error occurred during transmission or reception of the first data block. Hiramatsu does not change antennas to interrupt a sequential selection of its antennas when the error message disclosed at column 6, lines 42-44 is received. Rather, Hiramatsu only changes antennas when a report of signal quality is received, which report is received after the error message has been received.

Hiramatsu further discloses that the data is not retransmitted in response to its error message. Rather, a request for a report on signal quality is transmitted, and then and only then is the data is retransmitted but not in response to the error message, but instead in response to receipt of the report on signal quality. (See column 6, lines 44-51). Thus, if no signal quality report were ever received, the data would never been retransmitted by the Hiramatsu transmitter.

In addition, Hiramatsu fails to teach or suggest retransmitting the first data block through the second one of the plurality of antennas, under conditions where "the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas." Hiramatsu also does not disclose resuming sequential selection of the plurality of antennas after the data block is retransmitted through the second one of the plurality of antennas, and transmitting additional data blocks through the sequentially selected antennas as is further recited in claim 1.

B. The Odenwalder Patent

The Odenwalder patent discloses a method for controlling the transmission of a data block through a plurality of antennas. According to this method, different portions of the same data block are simultaneously transmitted through antennas 34 and 36. (See column 4, line 63 - column 5, line 4). These antennas, therefore, are used at the same time to transmit a data block. This is very different from the method defined in claim 1.

Specifically, the method of claim 1 does not use its antennas at the same time to transmit different portions of a same data block. Rather, the antennas are alternatively used to transmit different data blocks at any given time. For example, if a NACK signal is received with respect to a data block transmitted through antenna 1, retransmission of that data block is performed through antenna 2. Furthermore, a sequential antenna selection scheme is used to transmit data

blocks. In contrast, the Odenwalder method uses its antennas simultaneously to transmit different portions of a data block, for all data blocks to be transmitted. No sequential selection scheme is used.

In view of these differences, it is submitted that Odenwalder does not teach or suggest the features of claim 1 missing from the Hiramatsu patent. That is, Oldenwalder does not teach or suggest performing a "sequential selection of a plurality of antennas" for purposes of transmitting data blocks. Odenwalder also fails to teach or suggest "interrupting sequential selection of the plurality of antennas to select the second one of the plurality of antennas in response to the first error signal," or retransmitting the first data block through the second one of the plurality of antennas, under conditions where "the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas."

C. The Ohashi Patent

The Ohashi patent discloses switching transmission antennas when an antenna-switching requiring factor occurs. One factor includes an error that occurs during the transmission of data. (See column 8, line 41). However, unlike claim 1, when such an error is received, the Ohashi patent begins a retransmission process which involves repeatedly transmitting the same data a predetermined number of times through sequentially changed combinations of the antennas. (See column 12, lines 43-46).

This sequential transmission is performed through all of the antennas including the antenna that initially transmitted the error data. This is clear from column 13, lines 23-27, which discloses that when the retransmission count reaches 4 (meaning that the same data has been transmitted through antennas 11 and 12 twice each), then the retransmission process is completed. Thus, Ohashi redundantly transmits the data through all of its antennas multiple times. Moreover, Ohashi retransmits only the error data redundantly and not in consecutive sequence with new data to be initially transmitted.

Furthermore, in Ohashi, the antennas are switched based on a switch count and transmission switch interval value (column 2, line 66-column 3, line 10), not in response to a first error signal of the type recited in claim 1. And, also, only the error portion of a data block is retransmitted by Ohashi, not the entire data block as required by claim 1.

Thus, Ohashi does not teach or suggest many features of claim 1 missing from the Hiramatsu and Odenwalder references, including retransmitting the first data block through the second one of the plurality of antennas, under conditions where "the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas."

D. The Weerackody Patent

The Weerackody patent discloses transmitting a packet through a first antenna. If a NACK signal is received in response, the packet is retransmitted through a second antenna. (See column 2, lines 12-25). However, Weerackody does not teach or suggest the same type of retransmission control as recited in claim 1.

That is, while Weerackody discloses retransmitting a packet through a second antenna, it does not teach or suggest retransmitting the first data block through the second one of the plurality of antennas under conditions where "the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas." As a result of this difference, the claimed invention performs transmission of new data and retransmission of previously transmitted data faster and more efficiently than the Weerackody system.

E. The Eastmond Patent

The Eastmond patent discloses transmitting a consecutive sequence of blocks. But Eastmond does not teach or suggest the features of claim 1 missing from the Hiramatsu, Odenwalder, Ohashi, and Weerackody references.

Based on these differences, it is respectfully submitted that claim 1 is allowable over the cited combination. Furtherance of claim 1 and its dependent claims to allowance is respectfully requested.

Claim 6 has been amended to more closely cover alternative embodiments of the invention including but not limited to the embodiment that corresponds to Figure 7 of the application drawings. As amended, claim 6 recites many features similar to the ones which patentably distinguish claim 1 from the cited references.

For example, claim 6 recites "sequentially selecting a plurality of antennas to transmit data, wherein a first antenna is selected to transmit a first data block and a second antenna is selected to a second data block, the first and second data blocks being consecutive data blocks, receiving a first signal indicating that an error occurred during transmission or reception of the first data block, the first error signal received after transmission of the second data block; interrupting sequential selection of the plurality of antennas to select the second antenna in response to the first error signal; retransmitting the first data block through the second antenna, wherein the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second antenna, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas." These features are not taught or suggested by the Hiramatsu, Odenwalder, Ohashi, Weerackody, or Eastmond patents, whether taken alone or in combination.

In addition, claim 6 recites "transmitting additional data blocks through the second antenna, the additional data blocks transmitted in consecutive sequence after retransmission of the first data block." These features are also not taught or suggested by the cited patents, whether taken alone or in combination.

Claim 16 has been amended to recite features similar to those added to claim 1, which is patentably distinguishable from the cited combination for the above-noted reasons. Furtherance of claim 16 and its dependent claims to allowance is therefore respectfully requested.

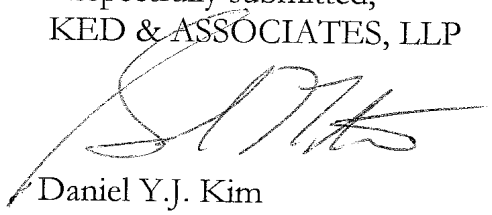
Claim 19 has been amended to recite features similar to those added to claim 6, which is patentably distinguishable from the cited combination for the above-noted reasons. Furtherance of claim 6 and its dependent claims to allowance is therefore respectfully requested.

Claims 13, 14, 25, and 26 were rejected under 35 USC § 103(a) for being obvious in view of a Hiramatsu-Ohashi-Eastmond-Texas Instruments-Weerackody combination. Applicants traverse these rejections on grounds that the Texas Instruments article and Weerackody patent do not teach or suggest the features of base claims 1 and 16 missing from the Hiramatsu, Ohashi, and Eastmond patents.

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
KED & ASSOCIATES, LLP



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